

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application:

1. (original) A light emitting device having formed therein a light emitting layer section based on a double heterostructure in which a p-type cladding layer, an active layer and an n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, are stacked in this order, the device using a face on the n-type cladding layer side as a light extraction surface, and having, as being provided on the main surface on the light extraction surface side of the n-type cladding layer, an n-type low resistivity layer composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, and having a content of an n-type dopant larger than that in the n-type cladding layer.
2. (original) The light emitting device as claimed in Claim 1, having a metal bonding pad provided so as to cover a part of the main surface of the n-type low resistivity layer.
3. (currently amended) The light emitting device as claimed in Claim 1 ~~or 2~~, wherein the n-type low resistivity layer has an effective carrier concentration of  $1 \times 10^{17}/cm^3$  to  $1 \times 10^{20}/cm^3$ , both ends inclusive.

4. (original) The light emitting device as claimed in Claim 3, wherein the n-type low resistivity layer has an n-type dopant concentration of  $1\times10^{17}/\text{cm}^3$  to  $1\times10^{20}/\text{cm}^3$ , both ends inclusive.

5. (currently amended) The light emitting device as claimed in ~~any one of Claims~~ Claim 1 to 4, wherein the n-type low resistivity layer contains, as the n-type dopant, one of or more of B, Al, Ga and In.

6. (currently amended) The light emitting device as claimed in ~~any one of Claims~~ Claim 1 to 5, wherein the n-type low resistivity layer is grown as a  $\text{Mg}_a\text{Zn}_{1-a}\text{O}$ -type oxide layer by MOVPE process, while incorporating therein the n-type impurity in the growth step.

7. (currently amended) The light emitting device as claimed in ~~any one of Claims~~ Claim 1 to 5, wherein the n-type low resistivity layer is obtained by initially being grown in vapor phase in a form of a  $\text{Mg}_a\text{Zn}_{1-a}\text{O}$ -type oxide layer having an n-type dopant concentration lower than the final n-type dopant concentration, and then by allowing the n-type dopant to additionally diffuse therein from the main surface of the layer.

8. (currently amended) The method of fabricating a light emitting device as claimed in ~~any one of Claims~~ Claim 1 to 7, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase,

the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

9. (new) The light emitting device as claimed in Claim 2, wherein the n-type low resistivity layer has an effective carrier concentration of  $1 \times 10^{17}/cm^3$  to  $1 \times 10^{20}/cm^3$ , both ends inclusive.

10. (new) The light emitting device as claimed in Claim 9, wherein the n-type low resistivity layer has an n-type dopant concentration of  $1 \times 10^{17}/cm^3$  to  $1 \times 10^{20}/cm^3$ , both ends inclusive.

11. (new) The light emitting device as claimed in Claim 2, wherein the n-type low resistivity layer contains, as the n-type dopant, one or more of B, Al, Ga and In.

12. (new) The light emitting device as claimed in Claim 2, wherein the n-type low resistivity layer is grown as a  $Mg_aZn_{1-a}O$ -type oxide layer by MOVPE process, while incorporating therein the n-type impurity in the growth step.

13. (new) The light emitting device as claimed in Claim 2, wherein the n-type low resistivity layer is obtained by initially being grown in vapor phase in a form of a

$Mg_aZn_{1-a}O$ -type oxide layer having an n-type dopant concentration lower than the final n-type dopant concentration, and then by allowing the n-type dopant to additionally diffuse therein from the main surface of the layer.

14. (new) The light emitting device as claimed in Claim 3, wherein the n-type low resistivity layer is obtained by initially being grown in vapor phase in a form of a  $Mg_aZn_{1-a}O$ -type oxide layer having an n-type dopant concentration lower than the final n-type dopant concentration, and then by allowing the n-type dopant to additionally diffuse therein from the main surface of the layer.

15. (new) The light emitting device as claimed in Claim 9, wherein the n-type low resistivity layer is obtained by initially being grown in vapor phase in a form of a  $Mg_aZn_{1-a}O$ -type oxide layer having an n-type dopant concentration lower than the final n-type dopant concentration, and then by allowing the n-type dopant to additionally diffuse therein from the main surface of the layer.

16. (new) The method of fabricating a light emitting device as claimed in Claim 2, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding

layer are then grown in vapor phase.

17. (new) The method of fabricating a light emitting device as claimed in Claim 3, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

18. (new) The method of fabricating a light emitting device as claimed in Claim 9, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

19. (new) The method of fabricating a light emitting device as claimed in Claim 4, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide,

sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

20. (new) The method of fabricating a light emitting device as claimed in Claim 10, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

21. (new) The method of fabricating a light emitting device as claimed in Claim 5, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

22. (new) The method of fabricating a light emitting device as claimed in Claim 11, wherein, in the process of formation of the light emitting layer section having a double

heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

23. (new) The method of fabricating a light emitting device as claimed in Claim 6, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

24. (new) The method of fabricating a light emitting device as claimed in Claim 12, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

25. (new) The method of fabricating a light emitting device as claimed in Claim 7, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

26. (new) The method of fabricating a light emitting device as claimed in Claim 13, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.

27. (new) The method of fabricating a light emitting device as claimed in Claim 14, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding

layer are then grown in vapor phase.

28. (new) The method of fabricating a light emitting device as claimed in Claim 15, wherein, in the process of formation of the light emitting layer section having a double heterostructure by growing, in vapor phase, the p-type cladding layer, the active layer and the n-type cladding layer, individually composed of a  $Mg_aZn_{1-a}O$  ( $0 \leq a \leq 1$ ) type oxide, sequentially in this order, the device after formation of the p-type cladding layer is annealed in an oxidative gas atmosphere, and the active layer and the n-type cladding layer are then grown in vapor phase.